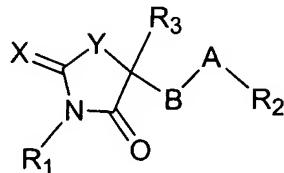


1. (original) A composition comprising a compound of the formula



or pharmaceutically acceptable salts thereof together with a pharmaceutically acceptable carrier, excipient, or diluent, wherein

A is aryl or heteroaryl;

B is C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl;

X is sulfur, oxygen, =CR<sub>4</sub>R<sub>5</sub>, =NR<sub>4</sub>, =NC(O)R<sub>4</sub>, or =NSO<sub>2</sub>R<sub>4</sub>,

Y is sulfur, oxygen, -C(R<sub>4</sub>)(R<sub>5</sub>)-, -N(R<sub>4</sub>)-, -NC(O)(R<sub>4</sub>)-, -NSO<sub>2</sub>(R<sub>4</sub>)-, -S(O)<sub>2</sub>-, or -S(O)-;

R<sub>1</sub> is -H, -NH<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkenyl, C<sub>1</sub>-C<sub>6</sub> alkyl-S-C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -NH-SO<sub>2</sub>-aryl, -C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)NR<sub>6</sub>R<sub>7</sub>, -C<sub>0</sub>-C<sub>6</sub> alkyl-C(S)NR<sub>6</sub>R<sub>7</sub>, C<sub>0</sub>-C<sub>6</sub> alky-heteroaryl-aryl, -NHC(O)-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)NH-C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-O-R<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -SO<sub>2</sub>R<sub>6</sub>, C(O)-R<sub>6</sub> or -C(O)-OR<sub>6</sub>, wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R<sub>5</sub>;

R<sub>2</sub> is -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl, -NO<sub>2</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -N(R<sub>6</sub>)-C(O)NR<sub>6</sub>R<sub>7</sub>, -NHSO<sub>2</sub>-aryl, C<sub>0</sub>-C<sub>6</sub> alky-heteroaryl-aryl or -C(O)-R<sub>6</sub>, wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R<sub>4</sub>;

R<sub>3</sub> is -H, C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl; or

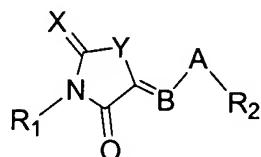
R<sub>3</sub> and B together with the carbon atom to which they are attached form an alkenyl or a spirocyclic ring;

R<sub>4</sub> is halogen, oxo, -C(O)OR<sub>6</sub>, -NO<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with halo, -C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with halo, -CH<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub> or -C(O)-OR<sub>6</sub>;

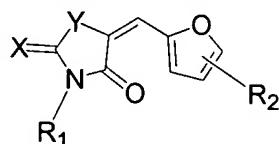
R<sub>5</sub> is halogen, oxo, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, -NO<sub>2</sub>, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH, -SO<sub>2</sub>NH<sub>2</sub> or -C(O)-OR<sub>6</sub>; and

R<sub>6</sub> and R<sub>7</sub> are independently -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, aryl, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH or -C(O)-OR<sub>6</sub>.

2. (original) The composition according to claim 1 wherein the compound is of the formula



3. (original) The composition according to claim 2 wherein the compound is of the formula

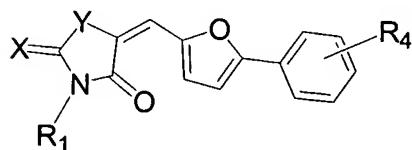


4. (original) The composition according to claim 3 wherein R<sub>1</sub> is -H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkenyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl or C<sub>0</sub>-C<sub>6</sub> alky-heteroaryl-aryl, and R<sub>2</sub> is -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl.

5. (original) The composition according to claim 4 wherein R<sub>1</sub> is -H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkenyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl, or C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)OR<sub>6</sub> and R<sub>2</sub> is C<sub>0</sub>-C<sub>6</sub> alky-aryl.

6. (original) The composition according to claim 5 wherein R<sub>1</sub> is -H, allyl, phenyl or benzyl and R<sub>2</sub> is phenyl.

7. (original) The composition according to claim 3 wherein the compound is of the formula

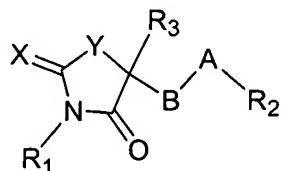


8. (original) The composition according to claim 7 wherein R<sub>1</sub> is -H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkenyl, C<sub>0</sub>-C<sub>6</sub> alky-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl or C<sub>0</sub>-C<sub>6</sub> alky-heteroaryl-aryl, and R<sub>4</sub> is halogen, oxo, -NO<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl, -C<sub>1</sub>-C<sub>6</sub> alkoxy, -CF<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub>, or -C(O)-OR<sub>6</sub>.

9. (original) The composition according to claim 8 wherein  $R_1$  is -H,  $C_1\text{-}C_6$  alkyl,  $C_1\text{-}C_2$  alkenyl,  $C_0\text{-}C_6$  alky-aryl, or  $C_0\text{-}C_6$  alkyl- $C(O)OR_6$ , and  $R_4$  is halogen,  $-\text{NO}_2$ ,  $C_1\text{-}C_6$  alkyl,  $-C_1\text{-}C_6$  alkoxy,  $-\text{CF}_3$ ,  $-\text{SO}_2\text{NH}_2$ , or  $-\text{C}(O)\text{OR}_6$ .

10. (original) The composition according to claim 9 wherein  $R_1$  is -H, allyl, phenyl or benzyl and  $R_4$  is chloro, bromo, fluoro,  $-\text{NO}_2$ ,  $-\text{OCH}_3$ ,  $-\text{CF}_3$  or  $-\text{C}(O)\text{OH}$ .

11. (original) A compound of the formula



or pharmaceutically acceptable salts thereof together with a pharmaceutically acceptable carrier, excipient, or diluent, wherein

$A$  is aryl or heteroaryl;

$B$  is  $C_1\text{-}C_6$  alkyl or  $C_2\text{-}C_6$  alkenyl;

$X$  is sulfur, oxygen,  $=\text{CR}_4\text{R}_5$ ,  $=\text{NR}_4$ ,  $=\text{NC(O)R}_4$ , or  $=\text{NSO}_2\text{R}_4$ ,

$Y$  is sulfur, oxygen,  $-\text{C}(\text{R}_4)(\text{R}_5)\text{-}$ ,  $-\text{N}(\text{R}_4)\text{-}$ ,  $-\text{NC(O)(R}_4)\text{-}$ ,  $-\text{NSO}_2(\text{R}_4)\text{-}$ ,  $-\text{S(O)}_2\text{-}$ , or  $-\text{S(O)}\text{-}$ ;

$R_1$  is -H,  $-\text{NH}_2$ ,  $C_1\text{-}C_6$  alkyl,  $C_1\text{-}C_2$  alkenyl,  $C_1\text{-}C_6$  alkyl- $S\text{-}C_1\text{-}C_6$  alkyl,  $C_0\text{-}C_6$  alky-aryl,  $C_0\text{-}C_6$  alkyl- $C(O)OR_6$ ,  $C_0\text{-}C_6$  alkyl-heteroaryl,  $C_0\text{-}C_6$  alkyl-heterocyclyl,  $C_0\text{-}C_6$  alkyl-carbocyclyl,  $-\text{NH-SO}_2\text{-}$  aryl,  $-C_0\text{-}C_6$  alkyl- $C(O)NR_6R_7$ ,  $-C_0\text{-}C_6$  alkyl- $C(S)NR_6R_7$ ,  $C_0\text{-}C_6$  alkyl-heteroaryl-aryl,  $-\text{NHC(O)-aryl}$ ,  $C_0\text{-}C_6$  alkyl- $C(O)\text{NH-C}_0\text{-}C_6$  alkyl- $C(O)\text{-O-R}_6$ ,  $C_0\text{-}C_6$  alkyl- $C(O)\text{-NH-C}_0\text{-}C_6$  alkyl-aryl,  $C_0\text{-}C_6$  alkyl- $C(O)\text{-NH-C}_0\text{-}C_6$  alkyl-heteroaryl,  $C_0\text{-}C_6$  alkyl- $C(O)\text{-NH-C}_0\text{-}C_6$  alkyl-heterocyclyl,  $C_0\text{-}C_6$  alkyl- $C(O)\text{-NH-C}_0\text{-}C_6$  alkyl-carbocyclyl,  $-\text{SO}_2\text{R}_6$ ,  $C(O)\text{-R}_6$  or  $-\text{C}(O)\text{-OR}_6$ , wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more  $R_5$ ;

$R_2$  is -H, halogen,  $C_1\text{-}C_6$  alkyl,  $C_0\text{-}C_6$  alky-aryl,  $-\text{NO}_2$ ,  $C_0\text{-}C_6$  alkyl- $C(O)\text{-OR}_6$ ,  $C_0\text{-}C_6$  alkyl-heteroaryl,  $C_0\text{-}C_6$  alkyl-heterocyclyl,  $C_0\text{-}C_6$  alkyl-carbocyclyl,  $-\text{N}(\text{R}_6)\text{-C(O)NR}_6\text{R}_7$ ,  $-\text{NHSO}_2\text{-}$  aryl,  $C_0\text{-}C_6$  alky-heteroaryl-aryl or  $-\text{C}(O)\text{-R}_6$ , wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more  $R_4$ ;

$R_3$  is -H,  $C_1\text{-}C_6$  alkyl or  $C_2\text{-}C_6$  alkenyl; or

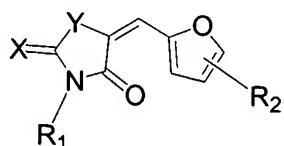
$R_3$  and  $B$  together with the carbon atom to which they are attached form an alkenyl or a spirocyclic ring;

R<sub>4</sub> is halogen, oxo, -C(O)OR<sub>6</sub>, -NO<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with halo, -C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with halo, -CF<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub> or -C(O)-OR<sub>6</sub>;

R<sub>5</sub> is halogen, oxo, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, -NO<sub>2</sub>, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH, -SO<sub>2</sub>NH<sub>2</sub> or -C(O)-OR<sub>6</sub>; and

R<sub>6</sub> and R<sub>7</sub> are independently -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, aryl, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH or -C(O)-OR<sub>6</sub>,

provided the compound is not a compound of the formula



X and Y are independently sulfur, oxygen, -CR<sub>4</sub>R<sub>5</sub>, -NR<sub>4</sub>, -NC(O)R<sub>4</sub>, -NSO<sub>2</sub>R<sub>4</sub>, -SO<sub>2</sub>, or -SO;

R<sub>1</sub> is -H, -NH<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> alkenyl, C<sub>1</sub>-C<sub>6</sub> alkyl-S-C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -NH-SO<sub>2</sub>-aryl, -C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)NR<sub>6</sub>R<sub>7</sub>, -C<sub>0</sub>-C<sub>6</sub> alkyl-C(S)NR<sub>6</sub>R<sub>7</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl-aryl, -NHC(O)-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)NH-C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-O-R<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-NH-C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -SO<sub>2</sub>-R<sub>6</sub>, C(O)-R<sub>6</sub>, or -C(O)-OR<sub>6</sub>, wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R<sub>5</sub>;

R<sub>2</sub> is -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, -NO<sub>2</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-C(O)-OR<sub>6</sub>, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heterocyclyl, C<sub>0</sub>-C<sub>6</sub> alkyl-carbocyclyl, -N(R<sub>6</sub>)-C(O)NR<sub>6</sub>R<sub>7</sub>, -NHSO<sub>2</sub>-aryl, C<sub>0</sub>-C<sub>6</sub> alkyl-heteroaryl-aryl, or -C(O)-R<sub>6</sub>, wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R<sub>4</sub>;

R<sub>4</sub> is halogen, oxo, -C(O)OR<sub>6</sub>, -NO<sub>2</sub>, C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with halo, -C<sub>1</sub>-C<sub>6</sub> alkoxy optionally substituted with halo, -CF<sub>3</sub>, -SO<sub>2</sub>NH<sub>2</sub>, or -C(O)-OR<sub>6</sub>;

R<sub>5</sub> is halogen, oxo, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>0</sub>-C<sub>6</sub> alkyl-aryl, -NO<sub>2</sub>, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH, -SO<sub>2</sub>NH<sub>2</sub>, or -C(O)-OR<sub>6</sub>; and

R<sub>6</sub> and R<sub>7</sub> are independently -H, halogen, C<sub>1</sub>-C<sub>6</sub> alkoxy, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, aryl, di(C<sub>1</sub>-C<sub>6</sub> alkyl)amino, -CF<sub>3</sub>, -OH, or -C(O)-OR<sub>6</sub>.

12. (currently amended) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 1~~any one of claims 1-10 or a compound according to claim 11~~.

13. (original) The method according to claim 12 wherein the cell is from a mammal.

14. (original) The method according to claim 13 wherein the mammal is human.

15. (currently amended) A method of treating cell proliferative diseases or conditions comprising administering to a patient an effective amount of a composition according to claim 1~~any one of claims 1-10 or a compound according to claim 11~~.

16. (original) The method according to claim 15 wherein the cell proliferative diseases are cancers.

17. (original) The method according to claim 16 wherein the patient is human.

18. (new) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 2.

19. (new) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 3.

20. (new) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 7.